WHAT IS CLAIMED IS:

1.   A method, comprising the steps of:
      determining a first circuit path between a source node and
a destination node in a Synchronous Optical Network (SONET)
ring comprising a plurality of nodes interconnected by links,
each of said links having associated with it a plurality of
facilities, each of said facilities having associated with it a
respective bandwidth utilization level, said facilities having
bandwidth utilization levels exceeding a first threshold level
are not used to define said first circuit path;

2.   The method of claim 1, further comprising the step of:
      selecting a second circuit path in the opposing direction
to said first circuit path where facilities having bandwidth
utilization levels below a first threshold level in said first
path can not be found for a Bi-directional Line Switched Ring
(BLSR).

3.   The method of claim 1, further comprising the step of:
      adjusting said threshold level where the bandwidth
utilization levels of facilities in said second path exceed
said first threshold level.

4.   The method of claim 2, wherein said first circuit path is
a short path.

5.   The method of claim 2, wherein said second circuit path is
a long path.

6.   The method of claim 3, wherein personnel are notified of a
lack of facilities.

7.   A method, comprising the steps of:

selecting a path between a source node and a destination node, said path comprising at least two intervening nodes coupled by at least one respective link, where said at least one link has associated with it respective facilities;

5   selecting one of said facilities within each of said at least one link for placing service on; and

determining whether a respective bandwidth utilization level for each selected facility within said circuit path is below a first threshold level.

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8.   The method of claim 7, further comprising the step of:

altering the direction of said circuit path, responsive to a negative determination that within at least one link of said path no facilities exist having respective bandwidth

15   utilization levels below said first threshold level for a Bi-directional Line Switched Ring (BLSR).

9.   The method of claim 8, further comprising the step of:

adjusting the first threshold level of said facilities

20   within said at least one link responsive to a negative determination that said respective bandwidth utilization levels of facilities within an altered direction of said circuit path exceed said first threshold level.

25   10.   The method of claim 9, further comprising the step of:

repeating said step of adjusting until a facility within said at least one link is found having a bandwidth utilization level that is below said adjusted threshold level.

30   11.   The method of claim 10, further comprising:

alerting personnel concerning lack of facilities.

12.   A method, comprising:

(a) selecting a first path between a source node and a

35   destination node, said first path having at least one link;

(b) selecting a facility within each of said at least one link connecting the source node to the destination node;

(b) determining the bandwidth utilization level for each selected facility within each of said at least one link;

5   (c) rejecting said selected facility in the case of said respective bandwidth utilization level being below a threshold level; and

(d) repeating steps (b) through (c) until a circuit path between said starting node and destination node has been

10   determined which meets said threshold level.

13.   The method of claim 12, further comprising the step of:

(e) selecting a path in an opposing direction for a Bi-directional Line Switched Ring (BLSR).

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14.   The method of claim 13, further comprising the step of

(f) repeating steps (b) through (d).

15.   The method of claim 12, further comprising the step of:

20   (g) adjusting the threshold level incrementally.

16.   The method of claim 15, further comprising the step of:

(h) repeating steps (a) through (g).

25   17.   A computer readable medium storing a software program that, when executed by a computer, causes the computer to perform a method comprising the step of:

determining a first circuit path between a source node and a destination node in a Synchronous Optical Network (SONET)

30   ring comprising a plurality of nodes interconnected by links, where each of said links has associated with it a plurality of facilities and each one of said plurality of facilities has associated with it a respective bandwidth utilization level, said facilities having bandwidth utilization levels exceeding a

first threshold level are not used to define said first circuit path.

18. The method of claim 17, further comprising the step of:
5 selecting a second circuit path in the opposing direction to said first circuit path where facilities having bandwidth utilization levels below a first threshold level in said first path can not be found for a Bi-directional Line Switched Ring (BLSR).

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19. The method of claim 18, further comprising the step of:
adjusting said threshold level where the bandwidth utilization levels of facilities in said first path exceed said first threshold level.

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20. The method of claim 19, further comprising the step of:
repeating said step of determining.

21. Apparatus, comprising:
20 an element manager, for determining a balanced circuit path between a source node and a destination node within a Synchronous Optical Network (SONET) ring comprising a plurality of nodes; and
a data base, for storing a respective bandwidth
25 utilization level for each of a plurality of facilities within links interconnecting said nodes;
said element manager determining whether said balanced circuit path is balanced by determining whether one of said plurality of facilities for each of said links interconnecting
30 said nodes has associated with it a bandwidth utilization level exceeding a threshold level, and iteratively selecting another facility within any of said links where the bandwidth utilization level of a previously selected facility has exceeded a threshold level.

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22.   The apparatus of claim 21, wherein:
    in the case of no facilities within said links being below
said utilization level, selecting a balanced path in the
opposite direction to said first path direction for a
Bi-directional Line Switched Ring (BLSR).

23.   The apparatus of claim 21, wherein:
    in the case no bandwidth utilization level of said
facilities within said links being below said threshold level
in said opposing direction to said first path, adjusting said
threshold level.